DOCUMENT RESUME

ED 230 117 HE 016 180

AUTHOR Warren, Russell G.
TITLE New Links Between General Education and Business Careers. Liberal Learning and Careers Series.
INSTITUTION Association of American Colleges, Washington, D.C.
REPORT NO ISBN-0-911696-15-6
PUB DATE 83
NOTE 35p.
AVAILABLE FROM Association of American Colleges, Box LLC, 1818 R Street, N.W., Washington, DC 20009.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Administrator Attitudes; College Graduates; Communication Skills; Computation; *Education Work Relationship; Employee Attitudes; *Employment Qualifications; *General Education; Higher Education; Interpersonal Competence; *Job Skills; *Liberal Arts; Logical Thinking; Personality Traits; Questionnaires; Work Attitudes

ABSTRACT

The suggestions of business executives concerning the content of a general education program that would assist students in achieving success in business were obtained through a 1982 survey. Questionnaire responses were obtained from 113 respondents in companies ranging in size from 1,000 or more employees to those with 50,000-plus employees. Five categories of skills important for business success were identified: communication skills, analytical ability, interpersonal competence, mathematical skills, and specific behavioral traits and attitudes. The behavioral attributes considered very important to success in business included a sense of responsibility, the ability to adapt to change, self-assurance, independence, and appearance. Attributes that become more important as employees advance in their careers were also identified. The results suggest that assisting students in preparing for careers need not be at the expense of other general education goals. It is concluded that most of the courses now offered in general education programs develop capabilities that are important to success in business; however, the methods of instruction could be important in some colleges for both career and general education objectives. A bibliography, sample questionnaire, and review of related research are included. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

AAC

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED230117

New Links Between General Education and Business Careers

by

Russell G. Warren
AAC National Fellow

Vice President for Academic Affairs
University of Montevallo

KE 016 181

aac Association of American Colleges

Projects and publications in the **Liberal Learning and Careers Series** were made possible in part by grants from Chevron, U.S.A., Inc.; Conwood Corporation; John Deere Foundation; Dobbs Houses, Inc.; Federal Express; First Tennessee Bank Corporation; The Ford Foundation; Holiday Inns, Inc.; International Business Machines Corporation; The Andrew W. Mellon Foundation; Schering Plough, Inc.; and the many corporate contributors to the AAC Special Fund.

ISBN 0-911696-15-6

© Copyright 1983
Association of American Colleges

Introduction

To what extent can general education programs assist students in preparing for careers? Is career preparation compatible with other goals of a general education program or must attention to careers diminish the liberal education thrust of such programs? These are important questions for the large number of colleges that are reexamining their curricula as part of a nationwide trend toward the renewal of general education. Career preparation is also becoming an important campus concern because of the decrease in job opportunities for students. Whether the goals of providing a broad general education for students and preparing them for careers are compatible is a timely question. This report is designed to assist colleges in answering that question.

Some of the answers are derived from a national survey of business executives completed in the summer of 1982. Their responses provide suggestions on the content of a general education program that would assist students in achieving success in business. The survey results suggest that assisting students in preparing for careers need not be at the expense of other general education goals. In fact, the study concludes that most of the courses now offered in general education programs develop capabilities that are important to success in business. The methods of instruction, however, could be important in some colleges, not only to prepare students more effectively for careers but to meet the objectives of general education as well. This study shows a real agreement among business and academic leaders, both on long-term goals and the need for higher achievement toward those goals.

The study is designed to answer questions raised at the University of Montevallo during its general education study. For that reason alone, it focuses on general education rather than the entire college experience which will be discussed in the conclusion. The study is also narrow in that it examines business careers only rather than careers of all types. Because it studies *broad* attributes important to success in business, however, its conclusions are applicable to other careers as well.

Career Preparation Through General Education

It is difficult to find a professor or college administrator who believes that college exists solely to prepare students for careers. A college education is preparation for a full and satisfying life, a life which includes civic participation, family responsibilities, and personal satisfaction as well as a career. It is easier to find individuals in higher education who believe that colleges should not devote any time to career concerns, especially in the general education program. While such individuals may be a minority, their position needs to be acknowledged by considering whether career preparation should be one of many aspects of general education programs.

Several educators, among them Ernest L. Boyer and Terrel Bell, argue that career preparation should be an integral aspect of general education because careers are an important aspect of life. Boyer made the case for career preparation as an essential component of any general education program. He observed that, "One of the most powerful commitments human beings make is the commitment to productive work. I believe we have been remiss in failing to recognize the powerful impact of work on our lives. Confronting this reality should be a central concern of the common core curriculum."[1] While some professors might object to Secretary Bell's use of the word "vocational," he made much the same argument when, in a speech to academic deans, he said,

> Many would argue that a student need merely master the basics in the liberal arts and the humanities to be well on the way to becoming educated. As I see it, this is far too narrow a view of education. Education is preparation for life, and living without meaningful work is just not living life to its full meaning and purpose. The liberal arts will always have the place at the heart of the curriculum. But we need to liberalize vocational education—and vocationalize liberal education. In the process we will attain the full measure of education.[2]

Fortunately, broad preparation for careers need not be at the expense of the traditional goals of general education mentioned earlier. Arthur Chickering contended that,

> It does not require any great creative leaps of imagination to think of ways to connect liberal arts or general education courses with pertinent social problems and related employment. Neither does it require any great leap to identify novels, plays, poems, and films pertinent to many jobs and working contexts. There are concepts from the social, behavioral, and natural sciences that underlie effective per-

> formance in the world of work as well as effective citizenship. . . . Pursuing a vocation, a calling, and pursuing a liberal education do not have to be incompatible or in conflict. They can be mutually reinforcing.[3]

In summary, it is possible to assist the student in his or her career preparation within the context of the traditional liberal arts subjects found in most general education programs. It is also possible to demonstrate the parallel point that the development of skills and abilities assists students in meeting non-occupational lifelong objectives. Broad career preparation for business and the other objectives of general education can be mutually reinforcing instead of conflicting. This relationship can be seen more clearly once the broad attributes important for success in business are identified.

Prior Research

The first step in the study is to determine the educational preparation most helpful to students who are planning to be successful business executives. Only then is it possible to determine the extent to which such preparation is consistent with the goals of general education.

There are surprisingly few studies identifying the skills, attitudes and knowledge necessary for success in business. While there are many articles and speeches on the subject, most of them arrive at unsubstantiated conclusions based on personal opinion. There are a few studies, however, which are based on more than conjecture; two of the most helpful ones are summarized here.

Midwest College Placement Association

The Midwest College Placement Association surveyed 625 employers of students graduated from colleges represented by the Association.[4] Along with other objectives, the survey was designed to identify "skills and qualities" which employers considered important when hiring a college graduate. The results are presented in Table I.

The study's conclusions point to the importance of a number of skills and qualities, including verbal communication, problem solving skills, written communication skills and math and research skills, which result directly from liberal arts courses. Further, several other identified skills such as initiative, self-discipline, self-confidence, and leadership might be expected to result indirectly from liberal arts courses if the teacher assists students by demonstrating the link. Other skills, interpersonal skills, for example, require more attention to behavioral traits than now exists in most general education programs. Yet the traits are important to many general educational objectives. Some researchers believe that teaching behavioral skills should be an explicit part of the curriculum. According to George Klemp, a researcher on qualities important to business success,

It appears that the major impact of a college education is on the development of cognitive skills. Differences among students and colleges in this regard are large, but in general, individuals are better able to think conceptually after the undergraduate experience than before. By contrast, neither interpersonal skills nor motivation appear to be altered by a college education. In light of the observations we have made about the skills that are related to success in the world of work, this finding is disappointing indeed.[5]

Table I

Skills and Qualities Which Employers Consider Important

Skills and qualities	Percentage considering item very important
Verbal communication	83%
Responsibility	79
Initiative	74
Interpersonal skills	74
Self-discipline	65
Problem solving skills	64
Decision making	63
Self-confidence	59
Written communication skills	64
High energy	53
Leadership	52
Working under pressure	42
Organizational skills	42
Meeting the public	37
Selling/promoting skills	31
Appearance	30
Math skills	29
Research skills	14

Source: *Report on the Liberal Arts Employer Survey: Opportunities for the Liberal Arts Graduate.* Liberal Arts Group, Midwest College Placement Association, 1980.

Bisconti and Kessler

In a 1980 study, Ann Bisconti and Jean Kessler identified specific learning experiences that related positively to success in various careers by surveying recent graduates (decade of the seventies) and older graduates (decade of the sixties) who were experienced in their careers.[6] The individuals contacted held only bachelor's degrees. While the graduates worked in many occupations, most were from business.

Graduates from both decades listed the following *skills and abilities* as important to their work effectiveness (in the authors' words):

- Interpersonal skills (ability to get along with, understand, influence, and sell one's self to others)
- Administrative skills (leadership, decision-making)
- Analytical, problem-solving abilities
- Communications skills (speaking to individuals or groups, conveying ideas, persuading, writing reports and business letters, listening)
- And, to a lesser degree, numerical skills

The following *attitudes and personal qualities* were considered important:

- Assertive qualities (self-confidence, drive, ambition to work independently, to take initiative)
- Work habits (organization, discipline, neatness, promptness)
- Interest in the work
- Work ethic (sense of responsibility, commitment to hard work, give the best you can)
- Moral qualities (honesty, tolerance)[7]

College experiences teaching "facts or content of the primary study area" were selected by only 29 percent as important for the first job and by only 8 percent for overall career development, although that conclusion is not applicable to those working in such technical fields as accounting, computer science, and engineering. Further, as one might expect, the more recent college graduates put greater emphasis on the importance of factual knowledge learned in college than graduates of the mid-sixties, the latter having a greater amount of on-the-job experience. This is a crucial observation. As time in a career increases, broad liberal arts skills become more important than specific business-related skills. That finding supports the contention that broad-based general education programs provide the best long-run preparation for business. In their conclusions, Bisconti and Kessler express disappointment at the fact that despite the importance of general education, "between 1966–67 and 1973–74 . . . the portion of the curriculum allocated to general education requirements, including English and mathematics, had decreased."[8]

Discussing the importance of non-classroom student activity, Bisconti and Kessler said,

> It appears that the college experience as a whole—just being away at college—was a strong influence in some cases. Being away from the protection of home, dealing with a large bureaucracy (though different from the bureaucracy of the working world), completing assignments, being in a competitive environment, all were cited as having a role in developing study and work habits, discipline, and maturity.[9]

This observation substantiates the importance of behavioral skills for job preparation and, incidentally, seems to point to the benefits of college residency versus commuting, so that the student can receive the full educational benefit of the campus environment offered outside of the classroom.

Lusterman

A third study goes beyond the two cited above by suggesting that while much of the content of traditional general education programs is consistent with business needs, colleges have failed in the teaching of these subjects. In studying employer-provided education and training for the Conference Board, Seymour Lusterman concludes that business executives feel that employees are weak in basic language abilities, reading, writing, and mathematical skills. According to Lusterman, "An important element in business's quarrel with academic high schools and liberal arts colleges is not that they lack a vocational curriculum, but that they perform poorly what they themselves perceive to be their most basic function—developing competence and skill in the use of language and the intellect."[10]

Conclusions from Prior Research

These two studies and Lusterman's comment allow inferences about the nature of a general education program which develops skills, attitudes, and knowledge important to business success. Three of these conclusions will be drawn here, while others will be discussed at the end of the study.

1. Traditional liberal arts subjects such as English composition, speech (facilitating one-on-one and small group interaction), mathematics, and psychology (which might improve student interpersonal skills) are important to students preparing for business careers. Creativity and the development of analytical ability are also important. Thus it would appear that many subjects now in place in colleges have applicability to students' future job success.
2. Businesses and college graduates alike believe that certain personality traits are important for business success. Among the most important are interpersonal skills, motivation, flexibility, perceptiveness, the ability to cope with uncertainty, self confidence, self control, moral qualities, and the willingness to accept responsibility. Businesses and graduates alike believe that colleges and universities should do more in developing student growth in these areas.
3. Many business executives feel that students are insufficiently prepared for work. This perceived lack of preparation is related both to the level of student achievement in traditional academic subjects as well as to the unwillingness of many colleges to consider the development of behavioral attributes within the domain of higher education.

There is another conclusion which can be drawn which is not related to curriculum implications but rather to the degree of confidence that can be placed in the conclusions of these two studies as well as the research presented in this paper. The conclusions of the studies presented above are

remarkably consistent with those that will be discussed in the next section of this paper. In each of the three studies, different executives were sampled at different times. The specific questions asked were different because the study objectives differed. Even the methods used to collect the information were different. That there is great similarity in the conclusions implies that all three studies are representative of the opinion of business and have broad applicability.

The Current Study

To expand and validate the skills, attitudes and knowledge important to success in business, a separate study was completed in the summer of 1982. A questionnaire asked business executives about the subjects most important to success in business in order to determine the characteristics of a general education program with career objectives. Only with that knowledge is it possible to make suggestions for such programs as well as be certain that business preparation is compatible with the traditional goals of most general education programs.

Through the use of mail questionnaires, 382 chief executive officers (including presidents) and vice presidents (or equivalent) for marketing, finance, operations, and manufacturing were asked to evaluate the importance of a series of broad skills, attitudes, and knowledge to the success of their college graduate employees. Each question asked about a characteristic that could be developed in a general education program, either as a direct or indirect outcome of having taken one or more courses or as a result of experiences outside the classroom. The number of items identified for response was necessarily limited by the amount of time an executive would be willing to devote to answering the questionnaire. After a trial test of the questionnaire, some of the items were reworded to use vocabulary familiar to business executives. A scale from 1 to 5 was used to assist the respondents in identifying the importance of the items.

In addition to asking the respondents to identify the importance of items and to add items of their own, the survey asked questions to identify the position of the respondent and the size of his or her firm. Further, two questions were asked about the provision of formal training programs within the respondent's firm either to correct employee deficiencies in specified areas or to enhance the skills, attitudes, and knowledge important to continued success in the firm. Finally, the respondents were asked about the importance of new employees having a technical skill applicable to their jobs when they were hired; this question was designed to give an indication of the relative emphasis which executives thought colleges should place on their general education program as compared to the major. A copy of the survey and a summary of the responses are included in the appendix.

The questionnaires were sent to individuals from Maine to Hawaii, selected

randomly from a Dun and Bradstreet computerized listing. Executives surveyed worked in companies ranging in size from 1,000 or more employees to those with 50,000-plus employees. Executives affiliated with companies of less than 1,000 employees were excluded from the survey design because of the poor response rate other researchers had experienced with them, although some of the executives receiving the questionnaire actually worked in companies of that size. Respondents had the option of identifying themselves in their responses. Details regarding the characteristics of the respondents are in Table II.

Table II
Summary of Respondent Characteristics

Questionnaires mailed	382
Questionnaires returned due to improper address	15
Questionnaires which reached executives	367
Completed questionnaires	113
Usable responses as a percent of questionnaires mailed	28%
Usable responses as a percent of questionnaires delivered	29%

Number of Respondents by Position

Chief Executive Officer or equivalent	19
Vice President for Marketing or equivalent	15
Vice President for Finance or equivalent	21
Vice President for Operations or equivalent	12
Vice President for Manufacturing or equivalent	9
Other	37
Total	113

Number of Respondents by Company Size

999 or fewer employees	4
1,000-4,000 employees	30
5,000-9,999 employees	14
10,000-49,999 employees	41
50,000 or more employees	24
Total	113

The majority of the respondents said that they work in companies in which 10 to 30 percent of the employees are college graduates.

Study Results

This section summarizes the perceptions of the business respondents about the skills, attitudes and sets of knowledge important for business success.

The section also identifies those attributes that become more important as employees advance in their careers. In addition, it presents the respondents' views on employee deficiencies, hiring factors, and the importance of further training by business. Responses did not vary significantly by position or by size of firm. Although the rate of response was relatively low, the consistency within the sample, plus the similarity to other studies, suggests that the results of the survey reflect accurately the views of a wide range of business executives.

Table III presents a list of the items respondents rated, mean response (from most to least important), and the percentage of the respondents who thought the item to be "very important" to success in their respective businesses. A rating of 1 is the highest response (very important) and 5 is the lowest (of little importance). Thus a low mean score indicates that the item is relatively important. A 3 represented undecided, making questionable use of the mean to rank order the items. The mean response, however, usually corresponds in the ranking with the percentage of respondents believing the item to be very important.

The nineteen attributes that received a mean rating between "very important" and "fairly important" can be grouped into broad categories, with some items falling into more than one category. These groupings of skills are:

Communication skills	Verbal communications skills, listening ability, writing skills, and persuasion skills.
Analytical ability	Reasoning, problem identification, creativity, independence of thought, the lack of prejudice.
Interpersonal skills	Getting along with others, listening ability, the ability to empathize with others.
Mathematical skills	Reasoning ability, application of basic mathematics.
Behavioral traits and attitudes related to sound business practice	Assume responsibility, ethics and morality, the ability to adapt to change, self assurance, freedom from prejudice, appearance.

The five categories include skills, attitudes, and knowledge usually taught in general education programs, although they also include behavioral traits which are generally not emphasized in the curriculum. Proponents of liberal education will be disappointed, although probably not surprised, that some traditional general education subjects are not ranked high. Knowledge of foreign cultures and foreign languages, for example, is near the bottom in importance to success in business in the eyes of the executives responding to the survey. Of some value but not overwhelming importance is the ability to speak to large groups, a skill usually emphasized in basic speech courses. The importance of computer literacy is evidenced by the fact that understanding the capability of a computer is considered important by the respondents, although actually being able to program computers received

Table III
Skills, Attitudes and Knowledge from Most Important to Least Important

Item	Mean	% Very Important
Interpersonal skills (ability to get along with others to facilitate accomplishment)	1.12	87.6%
Reasoning ability	1.14	85.8
Verbal communication skills (one-on-one and with small groups of less than twenty)	1.15	84.1
Willingness to assume responsibility	1.17	83.2
Ability to identify and formulate problems	1.31	69.0
Willingness to listen to opinions of others	1.36	63.7
Developed sense of ethics and morality even at the occasional expense of immediate personal gain and immediate business objectives	1.43	62.8
Ability to adapt to change	1.47	52.2
Writing skills including grammar, organization and style	1.48	54.9
Self assurance	1.53	46.9
Creativity (generate new ideas and/or apply old ideas to new situations)	1.58	50.4
Independence of thought	1.66	37.2
Freedom from prejudice against racial, ethnic, socio-economic, educational and other kinds of groups	1.69	46.9
Ability to apply basic mathematics to practical problem solving	1.82	31.9
Appearance (grooming and dress)	1.82	28.3
Skills of persuasion	1.83	31.9

Item	Mean	% Very Important
Ability to empathize with others (to put one's self in another's place for greater understanding of him or her)	1.92	27.4%
Commitment to the principles of the free enterprise system	1.98	31.0
Pursuit of self education (on-going course work and/or reading in occupational field)	2.10	19.5
Understanding the capabilities of a computer and the ability to talk with computer specialists about business needs	2.14	14.2
Ability to speak effectively to large groups (twenty or more)	2.36	14.2
Political skills (the ability to see the various political concerns of divergent groups in business and bring about agreement)	2.39	13.3
Ability to effectively perform practical business research	2.49	8.0
A broad range of interests in non-business matters	2.60	6.2
Physical fitness above that required to be well enough to come to work (Question is not applicable to handicapped employees)	2.63	5.3
Active involvement in the community	2.76	5.3
Broad knowledge of public affairs	2.85	1.8
General knowledge of scientific phenomena including technology and some general science	2.90	6.2
Knowledge of various economic systems (capitalism, socialism, communism, etc.)	3.07	3.5
Computer programming knowledge	3.52	1.8
Knowledge of foreign cultures	3.76	13.5
Writing and/or speaking knowledge of one or more foreign languages	4.01	0.9

Note: 1 = very important, 5 = unimportant

less emphasis. These judgments parallel the increased attention being given in many colleges to better understanding of technology.

A broad range of interests, including community involvement and knowledge of public affairs, does not seem particularly important. Physical fitness is also rated relatively low in importance. Altogether, being a well rounded individual is not highly valued by the executives in this survey.

The respondents were invited to add items which they thought were particularly important to the success of employees but which were not included on the questionnaire. The most frequent responses included the ability to plan, handling of ambiguity, commitment to the business enterprise, effective time management, ability to develop subordinates, flexibility, patience, and enthusiasm.

Rising to the top. The respondents were asked to identify from among the items "five skills, attitudes, and/or sets of knowledge which in your opinion become more important to success as a college graduate employee progresses to middle or top positions in your company." This question was designed to provide information for general education course design that looked at long-run career development, not simply preparation for the first job. Keeping in mind the fact that the respondents were each allowed to list five items, Table IV shows the responses in order of importance from most important. Those items identified by fewer than fifteen percent of the respondents are not listed. Each of the items identified as becoming more important to success as an employee moves to middle or top positions is also thought to be important to the success of all employees. A number of the items, including writing, problem formulation, reasoning ability, and verbal communications, are usually taught in general education programs.

Inadequate preparation. Areas of employee deficiencies, as identified by the respondents, suggest characteristics that colleges might consider for special emphasis in curriculum planning. The respondents were asked to "identify five skills, attitudes, and/or sets of knowledge where, in your opinion, the greatest deficiencies exist among your college graduate employees." Again, keeping in mind the fact that each respondent was allowed five responses, Table V shows the responses in order of importance from most deficient.

Many of the areas identified as needing improvement are qualities that colleges and universities have as their education objectives: writing skills, verbal communication skills, the ability to identify and formulate problems, reasoning ability, and, especially among church-related institutions, morality. These findings reinforce Lusterman's comment that many business executives think education is not meeting its traditional goals.

Specialized knowledge. To determine the importance of a college graduate's major, the question was asked, "In your opinion how important is it that the new college graduates you hire (without a graduate degree) have an in-depth knowledge of a specialty field (engineering, marketing, finance, mathematics, etc.) when you hire them?" The question was de-

Table IV
Items Important to Success in Middle or Top Business Positions

Item	Percentage of respondents listing item among top five
Verbal communication skills	51%
Ability to identify and formulate problems	45
Willingness to assume responsibility	43
Interpersonal skills	42
Reasoning ability	38
Creativity	27
Writing skills	24
Ability to function independently	24
Political skills	19
Ability to speak effectively to large groups	18
Listening skills	15

Table V
Deficiencies in Business Employees

Item	Percentage of respondents listing item among top five
Writing skills	56%
Verbal communication skills	31
Ability to identify and formulate problems	24
Willingness to listen to the opinion of others	23
Ability to function independently or with minimum supervision	23
A developed sense of ethics and morality	18
Interpersonal skills	16
Willingness to assume responsibility	15
Ability to adapt to change	15

signed to determine whether a broad education would be sufficient preparation for business or whether business expected new employees to come with specific skills. Overwhelmingly the respondents thought a specialty to be important. Forty percent thought it very important and 42 percent thought it to be fairly important. By contrast, only 1 percent thought it was of no importance and 16 percent thought it of little importance. The survey respondents believe that students wanting to be hired by a business should develop skills which are immediately usable in business. From the written responses one can infer that business executives believe the most valuable areas of study are such traditional business subjects as marketing, management, finance, economics, and accounting.

Importance of personality. One question was asked to determine the importance of student academic achievement to the business hiring decision: "In your opinion are the personality traits of most of the new college graduates you hire better predictors of their success in your business than their record of academic achievement in college?" Of course, the student exhibiting academic achievement probably has positive personality traits but the correlation is not perfect. Of the total respondents, 60 percent thought both about equal as predictors. Eight percent thought that academic achievement was a better predictor while a surprising 24 percent thought that personality traits were better predictors. This substantiates the earlier observation that executives believe certain behavioral traits are very important to business success. Consequently the respondents imply that the college or university that does nothing to improve its students' behavioral abilities is doing its students a disservice.

Education on-the-job. College is not the only source of career related education; among other educational sources, the graduate's firm might have its own educational program. To determine the extent of such programs, the respondents were asked if their companies offered instructional programs to provide skills for employees advancing to middle and top management. Sixty-five percent of them had at least limited programs while 34 percent did not. One percent was undecided. In response to a similar question about educational programs to correct identified employee deficiencies 54 percent of the respondents said they had at least limited efforts while 40 percent had no programs. As one might expect, larger companies were more likely to have educational programs than smaller ones. Based on these responses it seems that formal education still has a major responsibility for anticipating deficiencies and preparing employees in the skills, attitudes, and knowledge needed for advancement.

Advice to students. The final two questions, in turn, asked the respondents to give advice both to students preparing for business careers and also to colleges preparing those students. Many executives stressed the importance of proficiencies developed in traditional liberal arts courses, with special emphasis on grammar, interpersonal skills, analytical ability, and creativity. The president of a Pennsylvania firm best described the need for interpersonal skills.

> The textbooks and lectures were fine, and will stand you in good stead. But now put them on the shelf for a spell. Do not try to reorganize the world (or your company) fifteen minutes after you get your diploma. First you must learn one indisputable fact; real life is not nearly so black and white as you may have thought from your text and classroom experience. Interpersonal skills and development of two-way communications are much more important than learning how to read a balance sheet or how to develop a five-year business plan. The most important function you must learn is the ability to listen and understand.

This quotation also expresses the need that businesses have for a balance between cognitive and behavioral skills in employees.

Many executives suggested that students become involved in a broad range of college experiences to help them develop interpersonal skills and to increase their knowledge of business operations. One respondent said, "Make sure your elective courses are vastly different from your major. This is to give you a rounding." Another respondent suggested that the student work with "as many kinds of people as possible to broaden your perspective." Opportunities which assist the student in developing responsibility for his or her actions were thought to be especially important. An assistant vice president for human resources advised, "Take every opportunity to become acquainted with the burdens and rewards of assuming personal responsibility for one's own decisions and actions." Judging from other responses, many business representatives would include within the definition of "responsibility" time management, ethics, hard work, not "clock watching," independent work habits, and self-motivation. A number of executives also cited summer jobs and internships as ways of developing such attributes.

Students also received some traditional advice similar to that given by colleges. "Do dean's level work in college," and "Don't take electives in basket weaving," are some respondents' suggestions. Executives tend to feel that students who work hard in college usually do the same on the job.

Advice to colleges. A large percentage of the respondents thought colleges should focus more on teaching the basics, especially written and oral communication. "Make sure graduates have basic skills they should have acquired even before college," "Place greater emphasis on English language—the ability to speak well and write well," and "Insist on mastery of grammar as a condition of graduation," were typical responses

These comments do not imply a desire on the part of most of the respondents to see a major in these subjects or even in liberal arts in general. Most of them thought that a major in a business subject should go along with mastery in the liberal arts subjects of English, oral communication, and to some extent, mathematics. Even when they support liberal learning, executives have a narrow focus oriented more toward basic skills than to the understanding of broad concepts. A few of the respondents, however, encouraged four years of liberal arts courses. The chairman and chief executive

officer of a small insurance company complained that "higher education is tending to become a trade school. People forget or have not been educated on the value of the liberal arts." Another respondent, a vice president for marketing of a large firm, recommended a liberal arts undergraduate program coupled with a graduate degree in business.

One respondent gave some practical advice in considering the balance between the number of course offerings and class size, noting also the importance of quality teaching. "Diversity of courses and majors is not nearly so important as quality instruction to relatively small groups of students. Seminars prepare people better than too many lectures." His advice regarding the benefit of seminars suggests one way to assist students in developing interpersonal skills by providing classroom exchange among students.

Compatibility of the Study Results with Traditional General Education Programs

Are the educational objectives important in preparing students for business careers compatible with other general education objectives? What courses are and are not compatible? Are there attributes suggested by the survey results which should be included in general education programs? The survey responses suggest that there is a remarkable degree of similarity between the objectives of business executives and the goals of general education.

Table VI compares responses to three survey questions. Column one presents those attributes important to business success which received a mean rating between fairly important and very important. Column two lists those areas in which employees are most deficient in the eyes of the respondents. Column three shows those qualities which become more important as an employee advances in business. Characteristics listed in column one are important factors to consider in preparing future business employees. To the extent that those attributes contribute to long term success, they become even more important. If current employees are also ill-prepared in the same areas, there is a mandate for inclusion in the general education program. The items not listed in Table VI have less importance when considering the relationship between general education and business success.

Compatibility. A number of items identified as important by business executives are very compatible with traditional general education program offerings. These include:

- Courses in English composition
- Courses in speech, especially those which center on the development of one-on-one and small group communication
- Courses in many academic fields which are designed to improve students' capabilities to identify and solve problems through reasoning ability
- Courses in many academic fields which foster independent thinking and otherwise make the student capable of being an independent person who takes responsibility for his or her actions

Table VI
Summary of the Most Important Skills, Attitudes and Knowledge

Skills, attitudes and knowledge with mean response between "Important" and "Very Important" (in order of importance from most important)	Percentage of respondents who believe item is among top five items of greatest deficiency	Percentage of respondents who believe items is among top five of times which become more important as employee advances in business
Interpersonal skills	16%	42%
Reasoning ability	—	38
Verbal communication skills	31	51
Assuming responsibility	15	43
Ability to identify & formulate problems	24	45
Willingness to listen	23	—
Developed sense of ethics & morality	18	—
Ability to adapt to change	15	—
Writing skills	56	24
Self assurance	—	27
Creativity	—	
Ability to function independently	23	24
Independent thought	—	—
Absence of prejudice	—	—
Basic mathematical ability	—	—
Appearance	—	—

- Courses which assist the student in developing his or her ethical and moral position and freedom from prejudice
- Courses in mathematics

The remarkable agreement between executives and educators on what should be taught suggests that preparation for business careers need not occur at the expense of liberal learning. However, the view that employees have significant deficiencies in every subject listed except for reasoning ability and mathematics points to areas for curriculum improvement, especially since most colleges and universities agree with business that these characteristics are important to a student's intellectual development. Current trends toward strengthening the teaching of writing and mathematics suggest that many colleges are already moving in this direction.

It is important and heartening to note the strong support for many liberal arts subjects by business men and women. To be sure, most of the respondents do not go so far as to recommend majors in liberal arts subjects. While they endorse liberal learning, they prefer preparation in a business major. That implies, by necessity, that colleges following their ad-

vice must take a "both-and" approach, developing broad skills, attitudes, and knowledge while at the same time providing specific job-related training.

Incompatibility. There are many subjects that are not particularly important to the business executives who responded to the questionnaire but are taught in most general education programs throughout the country. This difference exists in part because the executives were asked only to identify subjects important to success in business, not subjects important to all of life's goals. In other instances, executives and educators differ on the nature of preparation important to business success. Perhaps the greatest difference is the lack of importance placed by executives on community involvement, a knowledge of public affairs, a broad range of interests in non-business matters, and physical fitness. Most educators would consider breadth of experience and understanding of different disciplines to be essential for a liberal education and critical for later success. Equally surprising is the observation that the respondents thought commitment to the free enterprise system to be very important but knowledge of alternative economic systems to be of far less importance. It would seem that knowledge of alternative systems is essential to develop a solid commitment to capitalism. Many colleges and universities include economics courses among their general education distribution requirements but few teachers would center on free enterprise alone.

Finally the relatively low ranking of pursuit of self-education is surprising in light of the rapid change in business which requires employees to update their skills and knowledge regularly. Most educators believe that self-education is important to success in many endeavors and will try to instill the desire to learn in their students.

Many general education programs have components that develop public speaking which focus on speaking to large groups. To the extent that such courses assist students in developing self-confidence, the survey respondents would endorse them. If priorities have to be established, however, business executives would prefer that the emphasis be placed on small group and one-to-one speaking ability. Speaking to large audiences does become increasingly important, however, as business employees advance to higher positions.

There are a host of general education components which are thought to be important to general education programs by educators but which are not important to executives, including science, foreign languages, foreign cultures, and research techniques. Educators would understand why these items are not important to employees who do not have to rely on these skills in their daily life; however, they might point to the importance of skills, attitudes, and sets of knowledge which are indirectly developed in the *process* of a student's learning these subjects. Whether the respondents and educators really differ on the importance of the indirect objectives of these subjects is impossible to determine from this survey. What is clear is that to the extent that they believe the process is important, business executives would want teachers to identify explicitly the process and the indirect outcomes to enhance student learning. Higher education has a mixed perfor-

mance in making course outcomes clear to its students as well as in making the rationale for requiring some courses known to the general public. That so few of the respondents thought subjects such as foreign languages are important suggests that the rationale for the subjects was not made clear to them when they were college students.

Most educators who are proponents of a strong general education program are also proponents of a broad educational experience in the major. To the extent that the general education program is limited to the first two years of college and is followed by a technical major, it will always be difficult to prepare graduates adequately in broad skills, attitudes, and sets of knowledge. As professional accreditation and state certification agencies become more proscriptive, the opportunities for a broad education will be further diminished. Anyone on a college campus who has worked lately to develop a new general education program has wrestled with the problem of reconciling the hours required to provide a broad education with the hours required by these agencies for certification and accreditation. Too often the power of the agency has caused the general education program to yield to specialization. A reversal of the trend toward specialization might come through increased provision of education and training by employers. Such programs can tailor-make education to fit the employee's present position and in so doing, allow higher education to prepare the student broadly for many career positions and for many other aspects of life. Colleges and universities should stop seeing employer education programs as a threat and think instead of the employer as an educational partner which is well suited to teaching specialized skills.

Importance of Behavioral Skills

The respondents indicated that several behavioral attributes are very important to success in business, including interpersonal skills, sense of responsibility, the ability to adapt to change, self-assurance, independence, and even appearance. Other studies support the importance of these traits. Yet a review of general education programs indicates that few colleges deal directly with them. To be sure, student affairs staffs have tried to assist students in developing these traits, the master teacher has used his or her classroom to develop them while centering on cognitive development, and some disciplinarians contend that a knowledge of their subject automatically develops one or more of the traits. But why is their treatment not more explicit, more a part of the objectives of general education, and more prominent in the allocation of student and faculty time?

Such traits are important in many aspects of a graduate's life including effective citizenship, all phases of employment, the development of the affective dimension, and even, with the possible exception of interpersonal skills and appearance, the solitary life of the mind. The appropriateness of these skills to higher education cannot be dismissed because they are too narrow or because they are already developed when the student enrolls in college. Many professors complain about the lack of these behavioral skills in students and the survey results indicate deficiencies in these skills among business employees. These results suggest that more attention should be

given to these personality traits in a general education program.

There are several problems associated with the development of behavioral skills which help to explain the lack of emphasis within higher education. First, many professors have neither the experience nor the inclination to be concerned about teaching more than cognitive skills. Certainly very little that they encountered in their graduate education has prepared them for the task of development of behavioral traits. Second, colleges and college reward systems are organized around the teaching of academic disciplines such as English, mathematics, and history, not the development of personal attributes. Third, psychological research suggests that college comes too late in the students' lives to be able to make a *major* change in their behavior. Finally, if a college is to strengthen students behavioral skills, that goal must be a shared responsibility of all faculty and administrators, not just a matter left to small student affairs staffs.

Major college change must occur if the behavioral items listed above are to be taught effectively. Such change need not require new courses in the general education program or diminish the present liberal arts thrust. In fact, liberal learning can be enhanced. At a minimum, the classroom environment should be structured to involve students actively in the learning process. They should take responsibility for their own learning, engage in group activity, speak before other members of the class, and define their intellectual positions. Such changes require less reliance on lectures as a teaching method. Through the provision of such learning opportunities students can be encouraged to develop interpersonal skills, self-assurance, independence, responsibility, and the ability to adapt to change.

One of many exciting vehicles to make learning active is the learning group concept outlined by the sociologist Clark Bouton and Russell Garth of the Fund for the Improvement of Postsecondary Education.[11] Classes are divided into small groups which stay together for the semester. While the teacher does not meet regularly with the groups, he or she sets learning tasks to be completed in a manner determined by the groups. Bouton and Garth, in discussing the learning group, make the case for the importance of the many forms of active learning to develop behavioral skills.

> Because learning groups create an active learning process, they promote a wide range of liberal educational goals. The significance of this activity can best be appreciated by considering two facts about higher education. Success in college, as measured by course grades, shows little relation to success after college. And the abilities and qualities of mind commonly given as the goals of liberal education—which do seem related to future success—bear little relation to the expected behavior of students in the typical classroom. According to these goals, students should develop initiative, leadership, empathy, interpersonal skills, and the ability to think and learn independently. In the traditional classroom, however, the student role is passive, dependent, rigid, and noninteractive. Given this discrepancy between student

goals and methods of learning imposed by instructors, it is not surprising that success in class appears unrelated to success in life.[12]

Resident colleges have another set of opportunities to encourage positive group traits. Student affairs staffs can provide a campus environment which will provide a "real world" laboratory for students to apply that which they have learned. Dormitory living offers an opportunity to develop responsibility, adaptability, and cooperation; other opportunities exist in carefully advised fraternities or sororities. What better opportunity is there to teach reasoning ability, interpersonal skills, responsibility, and ethics than on an athletic team that has learning objectives? A responsible student government association can approximate many of the characteristics of a business.

All of these activities will require a supportive faculty and administration who can be shown that the teaching of behavioral skills does not come at the expense of traditional general education courses. The general education program can be improved by helping students develop both knowledge and personal traits that are necessary for their lives and careers after graduation.

Other Recommendations

This study has centered on recommendations for general education programs, yet it is impossible to divorce that phase of education from all others. Many of the observations made during the course of the study are applicable to the total operation of a college; some are even applicable to educational providers outside of higher education.

Courses in the student's major can also be structured to reinforce desirable behavioral traits. Further, they could be used to strengthen student proficiency in composition, reasoning ability, small group communication, and the development of ethical and moral stances. The development of these abilities does not require new courses in the major but rather the reinforcement of these skills, attitudes, and sets of knowledge while teaching traditional subject matter.

College administrators and faculty members have the opportunity to exhibit in their own behavior the same qualities that are encouraged among students. The entire operation of a college should provide a model for students of liberal arts qualities in action. If students are to learn to assume responsibility, be ethical, be analytical, lack prejudice, and adapt to change, those same attributes must be displayed by college administrators and teachers. "Do as I say, not as I do" makes for good humor but poor instruction.

Elementary and high schools should put greater emphasis on the teaching of such basic subjects as mathematics, English, and reasoning ability. The deficiencies in employees noted by respondents to the survey are the same shortcomings that faculty members find in students entering college.

Continuing education programs serving the needs of adult learners should consider offering programs in the areas labelled as deficient by the business respondents. Even though employers are expanding their own educational programs, the survey results still point to the need for outside sources of employee education. There should be strong demand for courses in some basic cognitive subjects as well as for courses which develop important behavioral traits.

College placement offices should encourage departments to provide "bridges" between the college and future employers. In the narrative section of the questionnaire the respondents recommended cooperative programs with business including summer jobs, internships, and involvement of students in "real world" experiences. Executive-in-residence programs were also encouraged. Finally, survey respondents recommended that opportunities be offered for faculty to work with business during summers and sabbaticals to help them understand the nature of business and thus become more effective student advisors.

Conclusion

Too often educators and business executives assume that their educational philosophies are at odds, yet the survey results demonstrate a remarkable degree of agreement. While business executives do not support all aspects of liberal education as important to success in business, they support much of it. If they had been asked about their commitment to liberal arts as preparation for all aspects of life, their support might have been even greater. Both groups also see the need for stronger programs developing the skills and knowledge associated with general education, including English composition and reasoning ability. Many colleges and universities have already taken significant steps to improve the teaching of these subjects. In addition to their support of improving the teaching of these subjects, executives stressed the importance of behavioral skills not presently included in most general education programs. Yet with some effort these skills can be encouraged in college programs without threatening traditional subject matter. This action would result in graduates better prepared for all aspects of life.

The recommendations of the executives surveyed imply significant changes in the ways in which general education is taught. Speaking experience, class participation, and interactive learning suggest seminars, tutorials, and other structures requiring personal contact between faculty and students. Such offerings are more expensive than large lecture courses. To the extent that business leaders are serious about developing desirable qualities in future employees, perhaps they will also support the additional resources necessary to provide effective educational programs.

The major point of disagreement between educators and business executives deals with the relationship between general education and profes-

sional majors. The reality of the marketplace suggests that specialized training is more valuable than broad education in hiring new employees. Yet this survey also demonstrates that businesses want general skills and knowledge as well. Educators, students, and employers must all consider carefully the proper balance between general education and specialized training. Colleges should pause before expanding professional offerings in response to popularity among students and employers. In large part, the shifting relationship away from general education toward specialized programs has been encouraged by institutions under pressure to maintain enrollments, place students in jobs, and meet professional needs. Serious commitment to professional training is important, but when some specialty programs crowd out the general education program, colleges should consider whether these particular specialties should be offered at all. In some instances, the specialty might best be offered only to students who have completed the bachelor's degree.

It is clear, however, that the dilemma will not be solved by waiting for the day when employers see the virtue of the broad liberal arts alone. This survey suggests that much can be done to strengthen the general education program itself so that students develop the skills, attitudes, and knowledge that executives want in their employees. These improvements must also be demonstrated to businesses so that the demand will increase for students who possess these attributes. At the same time, it is clear that employers are also seeking persons with immediate business-related skills; colleges are doing a disservice to their students if they do not help them develop entry skills through courses, extracurricular activities and summer experiences.

The results of this study provide educators with encouraging news. General education in its present form is important to careers. Strengthening general education programs will only make them more useful to students seeking employment after graduation. This study provides tangible evidence that business executives value the skills and knowledge developed through liberal learning; it also suggests direct ways of enhancing the development of those abilities in students. This study has shown that business and academic leaders have more reason than ever before to work together to achieve compatible goals.

Notes

The author received a significant amount of assistance from others. While it is not possible to thank all of them, I would like to express special appreciation to Kathryn Mohrman of the Association of American Colleges. Others who were particularly helpful include Elizabeth Rodgers, Professor of English at the University of Montevallo; Richard Hart, Associate Professor of Economics at Miami University of Ohio; Stephanie Bennett, Dean of Westhampton College of the University of Richmond; and my secretary, Ellon Corbett. I am indebted to the Association of American Colleges for awarding the fellowship and the University of Montevallo for giving me a leave of absence in the summer of 1982.

[1]Dykman W. Vermilye, ed., *Relating Work and Education*. San Francisco: Jossey-Bass, 1977, p. 150.

[2]Jack Magarrell, "What Kind of Education, What Kind of Jobs?" *Chronicle of Higher Education*. January 20, 1975, p. 6.

[3]Vermilye, p. 139.

[4]*Report on the Liberal Arts Employer Survey: Opportunities for the Liberal Arts Graduate*. Liberal Arts Group, Midwest College Placement Association, 1980.

[5]Vermilye, p. 108.

[6]Ann S. Bisconti and Jean G. Kessler, *College and Other Stepping Stones: A Study of Learning Experiences that Contribute to Effective Performance in Early and Long-Run Jobs*. Bethlehem, Pa.: CPC Foundation, 1980.

[7]Bisconti and Kessler, pp. 31-32.

[8]Bisconti and Kessler, p. 79.

[9]Bisconti and Kessler, p. 44.

[10]Seymour Lusterman, *Education in Industry*. New York: The Conference Board, 1977, p. 61.

[11]Clark Bouton and Russell Garth, "The Learning Group: What It Is and Why It May Be Better," *AAHE Bulletin*. September 1982, pp. 7-9.

[12]Bouton and Garth, p. 9.

Bibliography

American Assembly of Collegiate Schools of Business. "Accreditation Research Project: Report of Phase I." *AACSB Bulletin*, 15 (Winter 1980).

Beck, Robert E. *The Liberal Arts Major in Bell System Management*. Washington: Association of American Colleges, 1981.

Bisconti, Ann S. and Kessler, Jean G. *College and Other Stepping Stones: A Study of Learning Experiences that Contribute to Effective Performance in Early and Long-Run Jobs*. Bethlehem, Pa.: CPC Foundation, 1980.

Bouton, Clark and Garth, Russell, *"The Learning Group: What It Is and Why It May Be Better." AAHE Bulletin* (September 1982).

Bucholz, Rogene A. *Business Environment/Public Policy: Corporate Executive Viewpoints and Educational Implications*. Washington: Center for the Study of American Business and the American Assembly of Collegiate Schools of Business, 1980.

Copeland, William. "Business/Industrial Challenges Facing Business Education." An unpublished speech given by the author at the National Business Education Association Convention in Washington, D.C. on April 14, 1982.

Cross, K. Patricia, Lynton, Ernest A., Nowlen, Philip N. and Stern, Milton R. "Partnerships with Business and the Professions." *Current Issues in Higher Education*, 3 (1981).

Hagge-Greenberg, Lana. *Report on the Liberal Arts Employer Survey: Opportunities for the Liberal Arts Graduate*. Midwest College Placement Association, 1980.

Lusterman, Seymour. *Education in Industry*. New York: The Conference Board, 1977.

Magarrell, Jack. "What Kind of Education, What Kind of Jobs?" *Chronicle of Higher Education*, (January 20, 1975).

Solmon, Lewis C., Bisconti, Ann S., and Ochsner, Nancy L. *College as a Training Ground for Jobs*. New York: Praeger Publishers, 1977.

Vermilye, Dykman W. ed. *Relating Work and Education*. San Francisco: Jossey-Bass, 1977.

Employee Needs of U.S. Businesses

1. Identification

Please answer the following questions to assist us in classifying your business. Respond by placing a circle around the letter of the response which most correctly identifies your position and your business. Individual responses to these and all other questions asked in the survey will be kept confidential.

1. The approximate number of employees in your company is:

a. 999 or less	3.5%
b. 1,000–4,999	26.5%
c. 5,000–9,999	12.4%
d. 10,000–49,999	36.3%
e. 50,000 or more	21.2%

2. Your position in your company is:

a. Chief Executive Officer	16.8%
b. Vice President for Marketing or equivalent	13.3%
c. Vice President for Manufacturing or equivalent	8.0%
d. Vice President for Finance or equivalent	18.5%
e. Vice President for Operations or equivalent	10.6%
f. Other (please specify)	32.7%

2. The approximate percentage of the total number of positions in your business which are filled with employees with a college degree is:

a. 10% or less	16.8%
b. 11-30%	49.6%
c. 31-50%	13.3%
d. 51-70%	9.7%
e. 71-90%	1.8%
f. 91-100%	1.8%
No response	7.1%

4. In your opinion how important is it that the new college graduates you hire (without a graduate degree) have an in-depth knowledge of a specialty field (engineering, marketing, finance, mathematics, etc.) when you hire them?

a. It is very important for the majority of those we hire	39.8%
b. It is fairly important for the majority of those we hire.	42.5%
c. It is of little importance for the majority of those we hire. We can provide the necessary training.	15.9%
d. It is of no importance for the majority of those we hire. We can provide the necessary training.	.9%
No response	.9%

5. In your opinion are the personality traits of most of the new college graduates you hire better predictors of their success in your business than their record of academic achievement in college?

a. Yes, personality traits are better predictors.	23.9%
b. No, academic achievement is a better predictor.	8%
c. Both are about equal as predictors.	59.3%
d. I do not have an opinion on this question.	7.1%
No response	1.8%

II. This section of the questionnaire is designed to assist colleges and universities in identifying those skills, attitudes, and sets of knowledge which a college graduate at all levels of your business organization needs in order to be successful in your business.

Below is a listing of skills, attitudes, or sets of knowledge. Please circle the letter next to each one which *in your opinion* best describes their importance to employee success in your business where:

a. It is very important for the majority of your employees who are college graduates.
b. It is fairly important for the majority of your employees who are college graduates.
c. Uncertain
d. It is not very important for the majority of your employees who are college graduates.
e. It is unimportant for the majority of your employees who are college graduates.

	Very Important	Fairly Important	Uncertain	Not Very Important	Unimportant
6. Verbal communication skills (one-on-one and with small groups of less than twenty).	84.1%	15.9%	0 %	0 %	0 %
7. Ability to apply basic mathematics to practical problem solving.	31.9	57.5	7.1	3.5	0
8. A writing and/or speaking knowledge of one or more foreign languages.	.9	7.1	8.8	55.8	27.4
9. Understanding the capabilities of a computer and the ability to talk with computer specialists about business needs.	14.2	69.0	5.3	11.5	0
10. Computer programming knowledge.	1.8	15.9	19.5	54.0	8.8
11. A broad range of interests in non-business matters.	6.2	49.6	23.0	20.4	.9

	Very Important	Fairly Important	Uncertain	Not Very Important	Unimportant
12. Pursuit of self education (on-going course work and/or reading in occupational field).	19.5%	63.7%	4.4%	11.5%	.9%
13. The ability to identify and formulate problems.	69.0	31.0	0	0	0
14. Reasoning ability.	85.8	14.2	0	0	0
15. Interpersonal skills. (ability to get along with others to facilitate accomplishment).	87.6	12.4	0	0	0
16. Writing skills including grammar, organization and style.	54.9	43.4	.9	.9	0
17. Physical fitness above that required to be well enough to come to work. (Question is not applicable to handicapped employees)	5.3	51.3	22.1	17.7	3.5
18. Ability to effectively perform practical business research (No response .9%)	8.0	57.5	13.3	17.7	2.7
19. Commitment to the principles of the free enterprise system.	31.0	46.9	13.3	8.0	.9

		Very Important	Fairly Important	Uncertain	Not Very Important	Unimportant
20.	General knowledge of scientific phenomena including technology and some general science. (No response .9%)	6.2%	43.4%	11.5%	30.1%	8 %
21.	Self assurance.	46.9	53.1	0	0	0
22.	Independence of thought.	37.2	60.2	1.8	.9	0
23.	Knowledge of various economic systems (capitalism, socialism, communism, etc.).	3.5	31.9	21.2	40.7	2.7
24.	Ability to speak effectively to large groups (twenty or more).	14.2	57.5	7.1	20.4	.9
25.	Ability to function independently or with minimal supervision.	40.7	57.5	.9	.9	0
26.	Ability to empathize with others (to put one's self in another's place for greater understanding of him or her).	27.4	58.4	8.8	5.3	0
27.	Creativity (generate new ideas and/or apply old ideas to new situations).	50.4	43.4	3.5	2.7	0
28.	A broad knowledge of public affairs.	1.8	43.4	24.8	27.4	2.7
29.	Skills of persuasion.	31.9	56.6	8.0	3.5	0

	Very Important	Fairly Important	Uncertain	Not Very Important	Unimportant
30. Political skills (the ability to see the various political concerns of divergent groups in business and bring about agreement). (No response .9%)	13.3%	52.2%	16.8%	15.0%	1.8%
31. Knowledge of foreign cultures. (No response 1.8%)	0	13.3	14.2	53.1	17.7
32. Freedom from prejudice against racial, ethnic, socio-economic, educational and other kinds of groups.	46.9	40.7	8.0	4.4	0
33. A developed sense of ethics and morality even at the occasional expense of immediate personal gain and immediate business objectives.	62.8	31.9	5.3	0	0
34. Active involvement in the community. (No response .9%)	5.3	44.2	22.1	24.8	2.7
35. Ability to adapt to change. (No response .9%)	52.2	46.9	0	0	0
36. Willingness to listen to the opinions of others.	63.7	36.3	0	0	0
37. Willingness to assume responsibility.	83.2	16.8	0	0	0

	Very Important	Fairly Important	Uncertain	Not Very Important	Unimportant
38. Appearance (grooming and dress).	28.3%	65.5%	1.8%	4.4%	0 %

39. Please identify below any other skills, attitudes, and sets of knowledge not listed above but which you believe are important for the majority of your employees who are college graduates.

The next two questions, 40 and 41, are designed to tell us about skills, attitudes, and sets of knowledge which become more important as an employee progresses in your company.

40. After reviewing questions 6–39, identify five skills, attitudes, and/or sets of knowledge which in your opinion become more important to success as a college graduate employee progresses to middle or top positions in your company. Please list the numbers of your responses (6–38) plus possibly your own specific response(s) in question 39.

41. As a follow-up to your response in question 40, does your company have an instructional program (in addition to that which informally takes place between supervisor and employee) to improve the skills, attitudes, or sets of knowledge you identified in question 40?

a. Yes	64.6%
b. No	32.7%
c. Not certain	1.8%
No Response	.9%

The next two questions, 42 and 43, are designed to tell us about skills, attitudes, and sets of knowledge where you see the greatest deficiencies in the performance of your college-graduate employees.

42. After reviewing questions 6–39, identify five skills, attitudes, and/or sets of knowledge where in your opinion the greatest deficiencies exist among your college-graduate employees. Please list the numbers of your responses (6–38) plus possibly your own specific response(s) in question 39.

43. As a follow-up to your response in question 42, does your company have an instructional program (in addition to that which informally takes place between supervisor and employee) to improve the skills, attitudes, or sets of knowledge you identified in question 42?

a. Yes	54.0%
b. No	39.8%
c. Not certain	4.4%
No response	1.8%

44. What advice would you give a college student to assist him or her in preparing for work with your business?

45. We would welcome your further thoughts regarding the manner in which colleges and universities could improve the quality of the college graduates you hire.

46. *Optional*
Name, title, firm, and address of the individual completing this survey. This is requested so that we can provide you with a copy of the study when it is completed.